

SEQ ID NO: 7

Sequence of the *Pichia methanolica* ketoreductase

ATG AAT TGG GAA AAA GTT CCA CAA GAA TTA TAC ACT  
5 MET Asn Trp Glu Lys Val Pro Gln Glu Leu Tyr Thr  
  
CGT TTG GGC TCT TCA GGT CTA CAA ATC TCC AAG ATT  
Arg Leu Gly Ser Ser Gly Leu Gln Ile Ser Lys Ile  
  
10 ATT GTT GGG TGT ATG TCA TTC GGT ACC AAA GCA TGG  
Ile Val Gly Cys MET Ser Phe Gly Thr Lys Ala Trp  
  
GGA GGT GAT TGG GTT TTG GAG GAT GAG GAT GAG ATC  
Gly Gly Asp Trp Val Leu Glu Asp Glu Asp Glu Ile  
15  
TTT GCG ATT ATG AAA AAG GCT TAT GAT CAA GGT ATC  
Phe Ala Ile MET Lys Lys Ala Tyr Asp Gln Gly Ile  
  
AGA ACT TTT GAC ACT GCT GAC TCT TAT TCT AAT GGT  
20 Arg Thr Phe Asp Thr Ala Asp Ser Tyr Ser Asn Gly  
  
GTT TCT GAA AGA CTC TTA GGT AAA TTC ATT AGA AAG  
Val Ser Glu Arg Leu Leu Gly Lys Phe Ile Arg Lys  
  
25 TAC AAC ATT GAT AGA TCT AAG CTT GTT ATT TTG ACT  
Tyr Asn Ile Asp Arg Ser Lys Leu Val Ile Leu Thr  
  
AAG GTT TTT TTC CCA GCT CCT GAA GAA TAT GAG TCG  
Lys Val Phe Phe Pro Ala Pro Glu Glu Tyr Glu Ser  
30  
TTT AGC TTC TTT AAT CAT AAT TTC CCT GGT CAC GAG  
Phe Ser Phe Phe Asn His Asn Phe Pro Gly His Glu

TTG GTC AAC AGA AGT GGC TTA TCG AGA AAA CAT ATT  
Leu Val Asn Arg Ser Gly Leu Ser Arg Lys His Ile

TTG GAC TCT GCT GCT GCC TCT GTT GAG AGA TTA GGC  
5 Leu Asp Ser Ala Ala Ala Ser Val Glu Arg Leu Gly

ACC TAT ATC GAT GTA CTA CAA ATT CAT AGA TAT GAT  
Thr Tyr Ile Asp Val Leu Gln Ile His Arg Tyr Asp

10 CCA AAT ACC CCT GCT GAA GAA ACC ATG GAA GCT TTG  
Pro Asn Thr Pro Ala Glu Glu Thr MET Glu Ala Leu

AAT GAT TGT ATT AAA CAA GGT TTA ACC AGA TAC ATT  
Asn Asp Cys Ile Lys Gln Gly Leu Thr Arg Tyr Ile

15

GGA GCA TCT ACC ATG AGA GCC TAT CAA TTC ATC AAG  
Gly Ala Ser Thr MET Arg Ala Tyr Gln Phe Ile Lys

TAT CAA AAC GTT GCT GAG AAA CAT GGG TGG GCA AAG  
20 Tyr Gln Asn Val Ala Glu Lys His Gly Trp Ala Lys

TTC ATC TCG ATG CAA AGC TAC TAC AGT TTA CTT TAC  
Phe Ile Ser MET Gln Ser Tyr Tyr Ser Leu Leu Tyr

25 CGT GAA GAA GAA GCA GAA CTA ATT GCA TAC TGT AAT  
Arg Glu Glu Glu Ala Glu Leu Ile Ala Tyr Cys Asn

GAA ACT GGT GTT GGG TTA ATC CCA TGG TCA CCA AAC  
Glu Thr Gly Val Gly Leu Ile Pro Trp Ser Pro Asn

30

GCT GGT GGA TTC TTA ACC AGA CCA GTA TCC AAG CAA  
Ala Gly Gly Phe Leu Thr Arg Pro Val Ser Lys Gln

GAC ACT GCG AGA AGT GCA AGT GGG GCT GCT GCG TTA  
Asp Thr Ala Arg Ser Ala Ser Gly Ala Ala Ala Leu

TAT GGT CTA GAA CCT TTC AGT GAG GCT GAT AAG GCT  
5 Tyr Gly Leu Glu Pro Phe Ser Glu Ala Asp Lys Ala

ATT ATT GAC AGG GTT GAA GAG TTA TCA AAG AAA AAG  
Ile Ile Asp Arg Val Glu Glu Leu Ser Lys Lys Lys

10 GGA GTT TCT ATG GCT AGT GTC GCT TTA GCT TGG GTT  
Gly Val Ser MET Ala Ser Val Ala Leu Ala Trp Val

ATT AGT AAG AAC AGT TGG CCA ATT ATT GGT TTC AGT  
Ile Ser Lys Asn Ser Trp Pro Ile Ile Gly Phe Ser  
15

AAG CCT GGA AGG GTT GAT GAT GCT TTA GAT GGT TTC  
Lys Pro Gly Arg Val Asp Asp Ala Leu Asp Gly Phe

AAG TTG AAG CTA ACC GAA GAG GAC ATC AAA TTC TTA  
20 Lys Leu Lys Leu Thr Glu Glu Asp Ile Lys Phe Leu

GAA GAG CCT TAT GTT CCA AAA CCT TTG CCT CGC TTA  
Glu Glu Pro Tyr Val Pro Lys Pro Leu Pro Arg Leu

25 TAT TCT GTA ATT TTA TAA  
Tyr Ser Val Ile Leu STP